
EXHIBIT 3

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

THE TRUSTEES OF PURDUE
UNIVERSITY,

Plaintiff,

v.

STMICROELECTRONICS N.V.,
STMICROELECTRONICS
INTERNATIONAL N.V., and
STMICROELECTRONICS, INC,

Defendants.

CIVIL ACTION NO. 6:21-CV-00727-ADA

JURY TRIAL DEMANDED

**PLAINTIFF'S FIRST SET OF DISCOVERY TO DEFENDANT
STMICROELECTRONICS, INC.**

Plaintiff The Trustees of Purdue University propounds the following discovery to Defendant STMicroelectronics, Inc. under Federal Rules of Civil Procedure 26, 33, 34, and 36, which set forth the requirements for answering. All responsive information should be provided to Shore Chan LLP, 901 Main Street, Suite 3300, Dallas, Texas 75202.

In this document, “**STMicroelectronics entity(ies)**” refers to any one or more of “STMicroelectronics N.V. together with its consolidated subsidiaries,” as that phrase is used in statements to the SEC (e.g., https://www.sec.gov/ix?doc=/Archives/edgar/data/932787/000156459021008102/stm-20f_20201231.htm).

In this document, “**STPOWER SiC MOSFET(s)**” means and includes all products and solutions marketed or distributed under any of the following part numbers: SETH50N120-7, SCT10N120H, SCTWA50N120-4, SCTWA50N120, SCTWA30N120, SCTWA20N120, SCTWA10N120, SCT50N120, SCT30N120, SCT30N120H, SCT1000N170, SCT1000N170AG, SCT10N120AG, SCT20N120, SCT10N120, SCT20N120AG, SCT20N120H, SCT20N170, SCT20N170AG; all products and solutions marketed or distributed under any of the following part numbers: SCTWA35N65G2VAG, SCTL35N65G2V, SETH100N65G2-7AG, SETH35N65G2V-7, SETH35N65G2V-7AG, SETH90N65G2V-7, SETH70N120G2V-7, SETH60N120G2-7, SETH40N120G2V7AG, SETH40N120G2V-7, SCTLW100N65G2AG, SCTLW70N120G2V, SCTLW35N65G2V, SCTLW35N65G2VAG, SCTLW90N65G2V, SCTWA35N65G2V, SCTWA90N65G2V, SCTWA90N65G2V-4, SCTWA70N120G2V-4, SCTWA60N12G2-4AG, SCTWA60N120G2AG, SCTWA60N120G2-4, SCTWA40N12G24AG, SCTWA40N120G2V, SCTWA40N120G2V-4, SCTWA35N65G2V4AG, SCTWA35N65G2V-4, SCTLW60N120G2,

SCTW60N120G2AG, SCTW40N120G2V, SCTW40N120G2VAG, SCTW35N65G2V, SCTW100N120G2AG, SCTL90N65G2V; all products and solutions marketed or distributed under any of the following part numbers: SCT011H75G3AG, SCT040H65G3AG, SCT040H65G3SAG, SCT040HU65G3AG, SCT055HU65G3AG, and SCT070H120G3AG; all silicon carbide Power MOSFETs marketed or distributed under the STPOWER name or mark; and any other silicon carbide Power MOSFETs marketed or distributed by an STMicroelectronics entity at any time since March 3, 2009. This definition includes all products identified on the following website: <https://www.st.com/en/sic-devices/sic-mosfets.html>. The phrase “STPOWER name or mark” in this definition encompasses: the word mark registered with the USPTO under serial number 79274308 (https://tsdr.uspto.gov/#caseNumber=79274308&caseSearchType=US_APPLICATION&caseType=DEFAULT&searchType=statusSearch); the word mark registered with the USPTO under serial number 79181494 (https://tsdr.uspto.gov/#caseNumber=79181494&caseSearchType=US_APPLICATION&caseType=DEFAULT&searchType=statusSearch); marks consisting of the wording “STPOWER” under the design of highly stylized power button symbol comprised of an incomplete circular band with a diagonal bar appearing in the open space at the top of the broken circle; marks consisting of a shaded brown circle having a design of two interlocked chain links superimposed thereon where the chain links are displayed in white with the wording “STPOWER” displayed in white superimposed on the circular design below the chain link design; and any other mark comprising the wording “STPOWER.”

In this document, “**United States**” means and includes the United States of America, its territories, and possessions, including Puerto Rico, Guam, U.S. Virgin Islands, Northern Mariana Islands, and American Samoa.

DISCOVERY REQUESTS

INTERROGATORY NO. 1: If at any time from March 3, 2009 to the present there existed a written agreement under which you had (or have) obligations, or in which you made promises, concerning the supply, purchase, or distribution of semiconductor products that would encompass STPOWER SiC MOSFETs, then for each such written agreement, state:

- (a) the title of the agreement;
- (b) the effective date;
- (c) the name of each party;
- (d) the name of all guarantors and intended third-party beneficiaries;
- (e) the name and title of each individual signatory;
- (f) the term of the agreement;
- (g) the governing law;
- (h) the choice of venue;
- (i) a description of the products covered;
- (j) the geographic scope of the agreement;
- (k) a description of the products covered by the agreement; and
- (l) each party’s respective promises and obligations concerning: (i) purchasing and ordering of such products for distribution in the United States, (ii) prices to be paid for such products ordered for distribution in the United States, (iii) the calculation of discounts on prices to be paid for such products ordered for distribution in the United States, (iv) payment for such products ordered for distribution in the United States, (v) shipping, risk of loss, and title of such products ordered for distribution

in the United States, (vi) promotion and marketing of such products to actual or potential customers in the United States, (vii) returns of such products by third parties, (viii) recalls of such products, (ix) record keeping for such products, (x) provision of sales literature, technical data, instruction manuals, and other promotional materials for such products; (xi) provision of training and technical assistance relating to such products; and (xii) warranting such products.

INTERROGATORY NO. 2: List the complete set of product codes for STPOWER SiC MOSFETs marketed or distributed in the United States at any time since March 3, 2009, and separately for each listed product code state: (a) the meaning of the letters, numbers and symbols used in the product code; (b) the trade name of the product corresponding to such product code; (c) the approximate date (i.e. day, month, year) such product first became available for distribution in the United States; and (d) the number (e.g. DS12081) for each data sheet corresponding to such product code.

INTERROGATORY NO. 3: For each STPOWER SiC MOSFET product code responsive to Interrogatory No. 2, state with specificity the following:

- (a) the dimensions of the MOSFET die, including the dimensions of the front surface (i.e. surface at which the gate regions of integrated MOSFET body regions), the dimensions of the rear surface (i.e. surface opposite the front surface), and the thickness (i.e. distance between front and rear surfaces);
- (b) the name of each functionally and chemically distinct layer and region in the MOSFET die, and the dimensions, material composition, conductivity, and doping value of each such layer and region;
- (c) the dimensions and material composition of the drain, and the arrangement of the drain in relation to the rear surface of the MOSFET die;
- (d) the dimensions and material composition of the semiconductor substrate;
- (e) the name, dimensions, material composition, conductivity, and doping value of any epitaxial layers or drift regions within the MOSFET die, and the arrangement of any such regions within the MOSFET die;
- (f) the number of source regions within the MOSFET die; the dimensions, material composition, conductivity, and doping value of each source region; and the arrangement of each such source region within MOSFET die;
- (g) the number of base regions within the MOSFET die; the dimensions, material composition, conductivity, and doping value of each base region; and the arrangement of each base region within the MOSFET die;
- (h) the number of insulated gate regions within the MOSFET die; the arrangement of each insulated gate region within the MOSFET die; and the dimensions and material composition of each insulated gate region, including (i) the dimensions and material composition of the gate, (ii) the thickness and material composition of the gate insulating layer aligned vertically below the gate (i.e. in the direction of the source regions), (iii) the thickness and material composition of the gate insulating material aligned vertically above the gate (i.e., in the direction of the gate contacts), (iv) the thickness and material composition of the gate insulating material on the horizontal sides of the gate (i.e. in the direction of an adjacent gate);

- (i) the number of MOSFET body regions, and the distance between each set of adjacent MOSFET body regions; and
- (j) the dimensions and material composition of any source metallization associated with the MOSFET die.

Your answer should state the requested dimensions, thicknesses, and distances in micrometers (μm). Your answer should also provide the typical, maximum, and minimum values for the requested dimensions, thicknesses, and distances. Your answer may include annotated cross-sections or schematics of the STPOWER SiC MOSFETs to illustrate the structure and dimensions of each product.

INTERROGATORY NO. 4: Describe in step-by-step detail the processes by which the die of each STPOWER SiC MOSFET is manufactured.

INTERROGATORY NO. 5: Describe in detail the sales and profitability of STPOWER SiC MOSFETs marketed or distributed in the United States from July 14, 2015 and to the present (“THE PERIOD”) by stating, separately for each product code responsive to Interrogatory No. 2, the following on a quarterly basis:

- (a) the name of the product corresponding to such product code;
- (b) the total volume (i.e., number of units) of such products imported, sold, or distributed in the United States during THE PERIOD;
- (c) the gross revenues recorded on such volume and attributed to the United States;
- (d) the net sales dollars recorded on such volume and attributed to the United States;
- (e) the cost of goods sold (COGS) recorded on such volume;
- (f) the royalty burden;
- (g) the gross margins; and
- (h) the average selling price of each unit of such volume.

If you generate reports to answer this Interrogatory under Rule 33(d), you should specifically identify such reports in your answer and provide them simultaneously with your answer. Any expenses that are not tracked at the unit level should be provided in whatever form and at whatever level they are tracked and should not be omitted from your answer.

INTERROGATORY NO. 6: Separately for each STPOWER SiC MOSFET product code responsive to Interrogatory No. 1, identify each United States patent and published patent application that you believe discloses or claims, or that you have represented discloses or claims, technology incorporated into the product corresponding to such product code.

Your answer should list all responsive patents and published patent applications in a way that makes clear which documents correspond to each particular product.

INTERROGATORY NO. 7: For each asserted claim of US7,498,633 and US8,035,112, state with specificity all grounds of alleged invalidity and unenforceability. Your answer must include all grounds of alleged invalidity based on anticipation under 35 U.S.C. § 102, obviousness under 35 U.S.C. § 103, unpatentable subject matter under 35 U.S.C. § 101, indefiniteness under 35 U.S.C. § 112(2), and enablement and written description under 35 U.S.C. § 112(1).

INTERROGATORY NO. 8: If you contend that one or more of the following product codes corresponds to a product that is not, and does not include, a MOSFET, then identify each such product code and state all grounds for your contention that such product code corresponds to a product that is not, and does not include, a MOSFET: SCTH50N120-7; SCT10N120H; SCTWA50N120-4; SCTWA50N120; SCTWA30N120; SCTWA20N120; SCTWA10N120; SCT50N120; SCT30N120; SCT30N120H; SCT1000N170; SCT1000N170AG; SCT10N120AG; SCT20N120; SCT10N120; SCT20N120AG; SCT20N120H; SCT20N170; SCT20N170AG; SCTWA35N65G2VAG; SCTL35N65G2V; SCTH100N65G2-7AG; SCTH35N65G2V-7; SCTH35N65G2V-7AG; SCTH90N65G2V-7; SCTH70N120G2V-7; SCTH60N120G2-7; SCTH40N120G2V7AG; SCTH40N120G2V-7; SCTW100N65G2AG; SCTW70N120G2V; SCTW35N65G2V; SCTW35N65G2VAG; SCTW90N65G2V; SCTWA35N65G2V; SCTWA90N65G2V; SCTWA90N65G2V-4; SCTWA70N120G2V-4; SCTWA60N12G2-4AG; SCTWA60N120G2AG; SCTWA60N120G2-4; SCTWA40N12G24AG; SCTWA40N120G2V; SCTWA40N120G2V-4; SCTWA35N65G2V4AG; SCTWA35N65G2V-4; SCTW60N120G2; SCTW60N120G2AG; SCTW40N120G2V; SCTW40N120G2VAG; SCTW35N65G2V; SCTW100N120G2AG; SCTL90N65G2V; SCT011H75G3AG; SCT040H65G3AG; SCT040H65G3SAG; SCT040HU65G3AG; SCT055HU65G3AG; and SCT070H120G3AG.

INTERROGATORY NO. 9: Identify by BATES number all documents you intend to rely on to support your contention that each of the following products is prior art: (a) MDmesh products made with any of the MDx0 dies; (b) MDmesh products made with any of the MDx1 dies; (c) MDmesh products made with of the MDx2 dies; (d) MDmesh products made with any of the MDx5 dies (including at least product codes STP12NM50, STB12NM50FP, and/or STB12NM50); (e) MDmesh products made with any of the MDx7 dies; (f) MDmesh products made with any of the MDx9 dies (including at least product code STW45NM50); (g) MDmesh products made with any of the MDxB dies; (h) MDmesh products made with any of the MDxN dies; (i) products made with a PP26 die (including at least product code IRFP250); and (j) products made with the EZ67 die (including at least product codes STP13NK60Z/FP, STB13NK60Z, STB13NK60Z-1, and STW13NK60Z).

INTERROGATORY NO. 10: Identify by BATES number all technical documents you produced that are “sufficient to show the operation of the accused product(s).” *See* Dkt. 79 (Court’s Standing Order Governing Proceedings) (requiring production of same); Dkt. 24.

REQUEST FOR PRODUCTION NO. 1: By June 13, 2022, produce organizational charts sufficient to identify the individual that leads, and team members responsible for, the following business functions as they relate to STPOWER SiC MOSFETs marketed or distributed in the United States at the present time: product design; process engineering; program management; regulatory affairs; product manufacturing; production; distribution; supply chain management; marketing; pricing ; sales; contracts; key accounts; accounting; and tax.

REQUEST FOR PRODUCTION NO. 2: By June 13, 2022, for each of the following product codes and any other product code responsive to Interrogatory No. 2, produce three physical specimens of the product corresponding to such product code: SCTH50N120-7; SCT10N120H; SCTWA50N120-4; SCTWA50N120; SCTWA30N120; SCTWA20N120; SCTWA10N120; SCT50N120; SCT30N120; SCT30N120H; SCT1000N170; SCT1000N170AG; SCT10N120AG;

SCT20N120; SCT10N120; SCT20N120AG; SCT20N120H; SCT20N170; SCT20N170AG; SCTWA35N65G2VAG; SCTL35N65G2V; SCTH100N65G2-7AG; SCTH35N65G2V-7; SCTH35N65G2V-7AG; SCTH90N65G2V-7; SCTH70N120G2V-7; SCTH60N120G2-7; SCTH40N120G2V7AG; SCTH40N120G2V-7; SCTW100N65G2AG; SCTW70N120G2V; SCTW35N65G2V; SCTW35N65G2VAG; SCTW90N65G2V; SCTWA35N65G2V; SCTWA90N65G2V; SCTWA90N65G2V-4; SCTWA70N120G2V-4; SCTWA60N12G2-4AG; SCTWA60N120G2AG; SCTWA60N120G2-4; SCTWA40N12G24AG; SCTWA40N120G2V; SCTWA40N120G2V-4; SCTWA35N65G2V4AG; SCTWA35N65G2V-4; SCTW60N120G2; SCTW60N120G2AG; SCTW40N120G2V; SCTW40N120G2VAG; SCTW35N65G2V; SCTW100N120G2AG; SCTL90N65G2V; SCT011H75G3AG; SCT040H65G3AG; SCT040H65G3SAG; SCT040HU65G3AG; SCT055HU65G3AG; and SCT070H120G3AG.

Plaintiff is willing to pay for such specimens at cost.

REQUEST FOR PRODUCTION NO. 3: By June 13, 2022, for each of the following product codes and any other product code responsive to Interrogatory No. 2, produce each version of the data sheet published for the product corresponding to such product code since the product was first introduced: SCTH50N120-7; SCT10N120H; SCTWA50N120-4; SCTWA50N120; SCTWA30N120; SCTWA20N120; SCTWA10N120; SCT50N120; SCT30N120; SCT30N120H; SCT1000N170; SCT1000N170AG; SCT10N120AG; SCT20N120; SCT10N120; SCT20N120AG; SCT20N120H; SCT20N170; SCT20N170AG; SCTWA35N65G2VAG; SCTL35N65G2V; SCTH100N65G2-7AG; SCTH35N65G2V-7; SCTH35N65G2V-7AG; SCTH90N65G2V-7; SCTH70N120G2V-7; SCTH60N120G2-7; SCTH40N120G2V7AG; SCTH40N120G2V-7; SCTW100N65G2AG; SCTW70N120G2V; SCTW35N65G2V; SCTW35N65G2VAG; SCTW90N65G2V; SCTWA35N65G2V; SCTWA90N65G2V; SCTWA90N65G2V-4; SCTWA70N120G2V-4; SCTWA60N12G2-4AG; SCTWA60N120G2AG; SCTWA60N120G2-4; SCTWA40N12G24AG; SCTWA40N120G2V; SCTWA40N120G2V-4; SCTWA35N65G2V4AG; SCTWA35N65G2V-4; SCTW60N120G2; SCTW60N120G2AG; SCTW40N120G2V; SCTW40N120G2VAG; SCTW35N65G2V; SCTW100N120G2AG; SCTL90N65G2V; SCT011H75G3AG; SCT040H65G3AG; SCT040H65G3SAG; SCT040HU65G3AG; SCT055HU65G3AG; and SCT070H120G3AG.

REQUEST FOR PRODUCTION NO. 4: By June 13, 2022, produce three physical samples of MOSFETs from each of the following: (a) MDmesh products made with any of the MDx0 dies; (b) MDmesh products made with any of the MDx1 dies; (c) MDmesh products made with of the MDx2 dies; (d) MDmesh products made with any of the MDx5 dies (including at least product codes STP12NM50, STB12NM50FP, and/or STB12NM50); (e) MDmesh products made with any of the MDx7 dies; (f) MDmesh products made with any of the MDx9 dies (including at least product code STW45NM50); (g) MDmesh products made with any of the MDxB dies; (h) MDmesh products made with any of the MDxN dies; (i) products made with a PP26 die (including at least product code IRFP250); and (j) products made with the EZ67 die (including at least product codes STP13NK60Z/FP, STB13NK60Z, STB13NK60Z-1, and STW13NK60Z).

REQUEST FOR PRODUCTION NO. 5: By June 13, 2022, produce all process flows and GDS files for MOSFETs from the following: (a) products made with a PP26 die (including at least

product code IRFP250); and (b) products made with an EZ67 die (including at least product codes STP13NK60Z/FP, STB13NK60Z, STB13NK60Z-1, and STW13NK60Z).

REOUEST FOR ADMISSION NO. 1: Admit that each product code listed in Interrogatory No. 8 in this document corresponds to a product that is, or includes, a MOSFET.

REOUEST FOR ADMISSION NO. 2: Admit that you did not produce, with your invalidity contentions, “technical documents... sufficient to show the operation of the accused product(s)” and that, as of May 13, 2022, you still have not produced any such documents.

Dated: May 13, 2022

Respectfully submitted,

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***COUNSEL FOR PLAINTIFF
THE TRUSTEES OF PURDUE UNIVERSITY***

CERTIFICATE OF SERVICE

The undersigned certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via e-mail on May 13, 2022.

/s/ Halima Shukri Ndai
Halima Shukri Ndai